

**ABSTRACT**

To use the memory space more effectively, cell memory can be shared by an input link and all output links. To prevent one flow from occupying the entire memory space, a threshold may be provided for the queue. The queue threshold may accommodate the RTT delay of the link. Queue length information about a downstream switch module may be sent to an upstream switch module via cell headers in every credit update period per link. Cell and/or credit loss may be recovered from. Increasing the credit update period reduces the cell header bandwidth but doesn't degrade performance significantly. Sending a credit per link simplifies implementation and eliminates interference between other links.